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The Living Diffractions of Matter and Text: Narrative Agency, Strategic Anthropomorphism, and how Interpretation Works

Abstract: In the past years, the agentic and semiotic properties of material reality have been the focus of many areas of research, producing an exuberant “turn to the material” also in the debate about the humanities. This “material turn” is indeed a broad conversation across disciplines, combining physics and sociology, biology and anthropology, ontology and epistemology, feminist theories, archaeology, and geography, just to name a few. The paradigm emerging from this debate prompts not only fresh nonanthropocentric vistas, but also possible “ways of understanding the agency, significance, and ongoing transformative power of the world – ways that account for myriad [...] phenomena that are material, discursive, human, more-than-human, corporeal and technological” (Alaimo and Hekman 2008: 5). The underlying task of this discourse is that of providing an onto-epistemological framework for non-dichotomous modes to analyze language and reality, human and nonhuman life, matter and mind, nature and culture.

A crossroad of scientific and humanistic research by definition, the environmental humanities is the field in which this “turn” received foremost attention. Ecocritical theory responds to this conceptual conversation by heeding material dynamics via an enlargement of its hermeneutical field of application. A *material* ecocriticism, in other words, investigates matter both *in* texts and *as* a text, elaborating a reflection on the way “bodily natures and discursive forces *express* their interaction whether in representations or in their concrete reality” (Iovino and Oppermann 2014: 2). Drawing from the philosophical and scientific insights of the new materialisms, this essay explores the main points of material ecocriticism, focusing in particular on the notion of “narrative agency” and on the way interpreting “stories of matter” becomes possible as an ecocritical practice.

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[T]hrough our advances, we participate in bringing forth the world in its specificity, including ourselves. We have to meet the universe halfway, to move toward what may come to be in ways that are accountable for our part in the world's differential becoming. All real living is meeting. And each meeting matters.

(Barad 2007: 353)

Agency and the Eloquence of Matter

In his award-winning book *What Do Pictures Want?* the visual theorist W. J. T. Mitchell argues that images have an intrinsic “vitality”, and that their “life” interferes with human phenomena in powerful ways. He writes:

The aim here is to look at the [...] agency, motivation, autonomy, aura, fecundity, or other symptoms that make pictures into ‘vital signs,’ by which I mean not merely signs *for* living things but signs *as* living things. If the question, what do pictures want? makes any sense at all, it must be because we assume that pictures are something like life-forms. (2005: 6)

Although coming from a quite different angle, these statements resonate significantly with a material-ecocritical approach, and especially with the notions of matter's textuality and “narrative agency”. According to this perspective, inspired by the onto-epistemology of the new materialisms, matter is not an inert or passive substratum, but it is a site of vibrantly “vital” processes where meanings coalesce with material dynamics. This notion has vast implications for literary criticism as well, and more specifically for the ideas of narrativity and text. If matter is agentic, and endowed with meanings (cf. Serpil Oppermann's essay in this collection and Barad 2007), every material formation, from bodies to their contexts of living, is “telling”, and therefore can be the object of a critical investigation aimed at discovering its stories, its material and discursive interplays, its place in a world filled with expressive – or *narrative* – forces.

From its very inception, ecocriticism investigates the way human creativity interacts with nature's narratives. Aldo Leopold's readers will find a poignant example of this in a famous chapter of *A Sand County Almanac* titled “Good Oak”. Here Leopold “reads” the story of eighty years of natural-cultural events in the wood of an oak tree hit by a lightning, after growing in the Wisconsin soil from the days of the Civil War to the end of the 1940s:

Fragrant little chips of history spewed from the saw cut, and accumulated on the snow before each kneeling sawyer. We sensed that these two piles of sawdust were something more than wood: they were the *integrated transect of a century*; that our saw was biting its way, stroke by stroke, decade by decade, into the chronology of a lifetime, *written in concentric annual rings of good oak*. (Leopold 2001 [1949]: 33, emphases mine; cf. also 27–39)

Though dismissed as naïve by modern practices of “disenchantment”, the metaphor of the “book of nature” is here effective again.¹ Indeed, every living being tells us evolutionary stories of co-existence, co-dependence, extinctions and survivals. Fossils do the same, only from a more “static” perspective. Also we, as human beings, are an example, and maybe the easiest one because we are the only ones that, among all natural entities, have developed narrative codes which are also linguistic codes: expressive codes, codes through which the world we experience becomes eloquent.

With its different waves and currents, ecocriticism has actually enlarged and complicated the spectrum of nature’s “voices”, which include not only animals or landscapes, but also waste, aliens, and hybrid configurations of beings. But, though the pathetic fallacy may be a noble and effective narrative technique, ecocriticism has also taught us to be cautious toward – or at least aware of – critical discourses which, more or less openly, anthropomorphize nature. Therefore, when we speak of an “expressiveness” of nature, we ought to admit that we are using a metaphor. W. J. T. Mitchell, quoted above, also recognizes the risk of attributing life to images by saying:

It would be disingenuous [...] to deny that the question of what pictures want has overtones of animism, vitalism, and anthropomorphism, and that it leads us to consider cases in which images are treated as if they were living things. The concept of images-as-organism is, of course, ‘only’ a metaphor, an analogy that must have some limits. (2005: 10)

Nevertheless, whether in a metaphoric sense or not, Mitchell courageously deploys this concept and – I believe – makes good use of it, interpreting “vitality” as the shared effectiveness of humans and pictures, and showing that the “visual reciprocity” between images and viewers is not “a by-product of social reality, but actively constitutive of it” (Mitchell 2005: 47). This constitutive “reciprocity” is also a distinctive trait of the vision that inspires material ecocriticism. Defined briefly and in general terms, material ecocriticism is the study of the way material forms – bodies, things, elements, toxic substances, chemicals, organic and inorganic matter, landscapes, etc. – interact with each other and with the human dimension, producing configurations of meanings and discourses that we can interpret as “stories”. Hence, our first questions: is there a way to go past metaphors, and to reconcile anthropomorphism with nature’s stories? How do we see the stories of nature as they co-emerge with the interpreter’s gaze, forming a “reciprocity” through which reality is “actively” constituted?

¹ On this issue, cf. Wheeler 2008 and Markos 2002.

Proposing a vision of the world as a dimension where diverse agentic forces emerge together and build their “formative histories” (Haraway 2004: 2) in ways which are at once natural *and* cultural, the new materialisms have suggested a pathway: the consideration of material agency as a form of expressiveness which emerges in the interchanges between corporeal beings and their social and natural environments.² The purpose here is, as Jane Bennett writes, “to give voice to a vitality intrinsic to materiality”, even though this vitality seems to be “both too alien and too close to see clearly and even though linguistic means [might] prove inadequate to the task” (2010: 3–4). Besides Bennett’s pivotal notion of “vibrant materialism”, a significant instance of this attempt to give voice to matter is Stacy Alaimo’s notion of “trans-corporeality”. Drawing from science studies, feminist epistemology and the ontology of the new materialisms, Alaimo builds her “trans-corporeality” to picture the way “bodily natures” express the tangles of organism and discourses, becoming eloquent about the unsolvable bond connecting life forms and life conditions (cf. Alaimo 2008 and 2010). From a confluent philosophical angle, another important example is given by David Abram’s ecophenomenology, an approach based on what we could define “sensuous co-emergences” of the languages and signs through which the “more-than-human” world expresses its mind (cf. Abram 1996 and 2010). In all these perspectives, agentic nature is a telling nature. This is another way of saying that the agency of nature is a narrative agency.³

There is, however, a particularity in this “nature”. “Nature”, in the context of the new materialisms, has a much broader semantic spectrum; it has less to do with “green ecology” than with a much more blurred and multihued dimension (cf. Cohen 2013a). It is something both physical and meta-physical. It is nature and its very condition: matter. Matter possesses an eloquent and signifying agency, which articulates itself in the differentiating of its forms. This point opens a key chapter in the vision of the new materialisms, namely, the mutual dependency of matter and meaning in the making of the world, a point that has been insightfully developed by the theoretical physicist and feminist epistemologist

2 On this expressiveness, Serpil Oppermann writes: “Material ecocriticism adds expressive creativity to the list of capacities [...]. This approach invites feeling empathy with all objects, human and nonhuman entities, and forces that constitute the matter of Earth within which human and nonhuman natures intertwine in complex ways” (2014: 27). In her accurate analysis of the postmodernist motives within the new materialisms, Oppermann connects this expressiveness to the project of a “re-enchantment” of the world.

3 I have provided an articulated discussion of these works in my essays “Steps Toward a Material Ecocriticism” and “Material Ecocriticism: Matter, Text, and Posthuman Ethics”. See also Iovino and Oppermann 2012 and 2012a.

Karen Barad. According to her theory of agential realism, matter and meaning are co-implied in the world's "differential becoming" (2007: 149): "Matter and meaning are not separate elements. They are inextricably fused together, and no event, no matter how energetic, can tear them asunder. [...] Mattering is simultaneously a matter of substance and significance" (Barad 2007: 3). As the core of this material expressiveness, meaning – Barad maintains – is not a mere synonym of language: it is rather "an ongoing performance of the world in its *differential intelligibility*" (2007: 335, emphasis mine).

This *meaningful* performance of co-emerging natures in their "differential intelligibility" is the basic concept of material ecocriticism, because it implies the horizontal involvement of the human in the becoming of the world. Integrally situated in the interplay of matter and meanings, our cognitive practices participate in the world's "differential intelligibility". Donna Haraway's idea that we have a "situated knowledge" of the world is explained by Barad as an articulation of the world in its emerging-together (or "intra-activity") with the human: "We are not outside observers of the world. Neither are we simply located at particular places *in* the world; rather, we are part of the world in its ongoing intra-activity" (2007: 184). Intelligibility, therefore, "is an ontological performance of the world in its ongoing articulation. [...] Knowing is a matter of intra-acting" (Barad 2007: 149). Every act of knowledge, and therefore every cognitive appropriation of the world, creates "interference patterns". Like in a quantum experiment, the observers are not estranged from the context of observation, but they are an integral "part of what they are watching, undeniably becoming *participants* in the process" (cf. Oppermann's essay in this collection). The whole process happens – as Haraway says – by way of "diffraction" (1997: 14), namely producing a participative rupture in the linearity of the single elements' performative properties. Employed by both Haraway and Barad, this optical metaphor underscores how knowledge practices are a differential co-articulation of human and nonhuman agencies. Most of all, however, a diffractive knowing produces interferences that "can make a difference in how meanings are made and lived" (Haraway 1997: 14). Whereas reflection simply repositions the same elsewhere, diffraction – somehow analogous to Kant's *a priori* synthesis – combines elements anew, producing new experiential conditions. It can therefore be "a metaphor for another kind of consciousness, [...] one connected to making a difference. [...] Diffraction is a narrative, graphic, psychological, spiritual, and political technology for making consequential meanings" (Haraway 1997: 273). Like knowing, our ethical practices, our choices, and our encounters also depend on this dynamics of co-emerging forces. This is the meaning intrinsic in Barad's claim that "we have to meet the universe halfway", and that "all real living is meeting" (2007: 353).

More than a literary and anthropomorphized *natura loquens*, a “talking nature”, material ecocriticism suggests that the compound matter-meaning, which includes the human as well, produces storied articulations. In our context, such articulations are called “intra-actions”, a term borrowed by Barad from the language of quantum physics and used to describe every worldly phenomenon as the emerging-together of matter and meaning, of material and discursive practices, of the human and the nonhuman. To say that such articulations are “storied” stresses the fact that matter’s dynamism is “sedimented” in a temporal dimension and can be known accordingly: “As the rings of trees mark the sedimented history of their intra-actions within and as a part of the world, so matter carries within itself the sedimented historicities of the practices through which it is produced as part of its ongoing becoming” (Barad 2007: 180). Seen in this light, the stories inscribed in Leopold’s oak tree assume an ontologically vaster perspective.

As this discussion clarifies, the new materialisms and material ecocriticism do not argue for an undifferentiated and static substance, a “massive, opaque plenitude” (Coole and Frost 2010: 10). Endowed with inherent agency, although not necessarily with intentionality, “matter” is a “stabilizing and destabilizing process” in which differences are continuously produced (Barad 2007: 151), and the human is part of this process. The focus of material ecocriticism captures therefore this very process, embracing not only the single agency of individual beings, but also the combinations of elements, forces, and practices that take place at multiple scales, seeing the human as constitutively involved in these combinations. Such an approach, as Dana Phillips and Heather Sullivan write, “may help us to recognize that we live in multiple worlds, some of them of our own making but many of them not” (2012: 447).

The multiplicity of layers to which this discourse applies is evident from the lists that can be frequently found in the studies about the new materialisms. Here one finds items and entities as diverse as “stem cells, electricity, food, trash, [...] metals” (Bennett 2010: x), “tumbleweeds, animal species, the planetary ecosystem, global weather patterns, social movements, health and crime, and economics” (Coole and Frost 2010: 13–14), viruses, political settings, “compound individuals” (Oppermann 2014), inorganic “stuff”, bodies that “enhance their power of activity by forming alliances with other bodies” (Bennett 2010: x), objects forming “choreographies of becoming” (Coole and Frost 2010: 10), and “matter [...] exhibiting immanently self-organizing properties” moving within “an intricate filigree of relationships” (Coole and Frost 2010: 13). However eccentric and even overwhelming they might seem (“New materialists are fond of lists”, Phillips ironizes; 2014: 172), these inventories and descriptions are important to understand the scope and the outlook of material ecocriticism and to remark how the natural and

the non-natural, the living and the non-living, things and words, organisms and artifacts, are equally present in this horizon. Even more important, though, is that they help us understand not only that matter is inherently endowed with agency (call it an “immanent” or “a-subjective” life, or a “thing-power”: see Bennett 2010: 53ff, 2ff), but also that matter is a field of “congregational” and differently articulated agencies, which act with and through each other producing unique and always different forms, following the complex paths of emergent rather than efficient causality.⁴ In this dynamic field, humans come together with countless nonhuman actors, whose agency – whether intentional or not – contributes to shaping the fabric of events. The separation between human agency and nonhuman agency is therefore much more blurred than we “moderns” (cf. Latour 1991) use to posit it in abstract terms.

The French sociologist and philosopher Bruno Latour, known as the main theorist of science and technology studies (STS), uses two important terms to describe this intermingling of agencies: “actant” and “collectives”. More generic than the (human) actor (defined as “an actant endowed with character”, Akrich and Latour 1994: 259), an actant is “something that acts or to which activity is granted by others” (Latour 1996: 370), an “entity that modifies another entity in a trial”, an “intervener” (Latour 2004: 237; 75).⁵ A virus, a chemical substance, electrical grids, the market, (nonhuman) actants are the epitome of agentic materiality. The main feature of actants is their cooperative efficacy: “an actant never really acts alone. Its [...] agency always depends on the [...] interactive interference of many bodies and forces” (Bennett 2010: 21). A “collective”, therefore, is a coalition of actants into an expanded web of “bodies and forces”. Seen in this light, the world’s phenomena – whether species extinction, climate patterns, racial discriminations, health policies, or the practices of extraction, transformation, and consumption of natural resources – are segments of a conversation between human and manifold nonhuman subjects, acting in combination with each other. Different from society, a human-centered term that “refers to a bad distribution of powers” (Latour 2004: 238), collectives take place whenever humans are tangled with nonhumans. Far from erasing any *formal* difference, this

4 Used in system- and complexity theories, emergent causality “is a mode in which new forces can trigger novel patterns of self-organization in a thing, species, system, or being, sometimes allowing something new to emerge from the swirl back and forth between them: a new species, state of the universe, weather system, ecological balance, or political formation” (Connolly 2010: 179–180).

5 It has to be noted that “actant”, for Latour, can denote human as well as nonhuman agents. In the new-materialist context, however, the generality of the term helps emphasize the effectiveness of nonhuman forms of agency. For a discussion, see Bennett 2010: viii–x, 8–10 and *passim*.

vision infers a co-operative juxtaposition, an exchange of properties between human and nonhuman beings.⁶ Collectives are everywhere: technology, cognitive experiences, industry, financial systems, or science: “we live in a hybrid world made up at once of gods, people, stars, electrons, nuclear plants, and markets” (Latour 1999: 16). Unlike human-centered systems, a perspective based on networks of agencies implies that things and nonhumans in general are no longer to be seen as mere objects, statically depending on a subject, but as “full-fledged actors” (Latour 1999: 174). Agency is thus a fold, a form of origami in which humans and nonhumans are materially pleated together: “there is a social history of things and a ‘thingy’ history of humans”, as Latour put it (1999: 18). These considerations usher in a complex vision based on the structural hybridity of the human self, whose agency and being are interdependent with the agency and being of the nonhuman: “Consider things, and you will have humans. Consider humans, and you are by that very act interested in things. Bring your attention to bear on hard things, and see them become gentle, soft or human. Turn your attention to humans, and see them become electric circuits, automatic gears or softwares” (Latour 2000: 20). Between humans and nonhumans, the boundaries are more like connective tissues than like iron walls.⁷

As these reflections imply, to talk of human agency alone is an abstraction, because actions, as well as stories and all formative patterns – whether social, natural, or technological – are always “intra-active” compositions in which humans encounter (or collide with) the nonhuman forces, phenomena, and “things” that share with them the stage of space and time. We do not simply have agency, we are in and contribute to networks of agencies: “reality is collectively, materially, and semiotically constructed” (Hekman 2010: 68).⁸ For material ecocriticism these networks of agencies manifest themselves in forms that can be read as narratives. This considerably affects the idea of interpretation. In fact, just like the

6 “[H]umans and nonhumans, provided that they are no longer in a situation of civil war, can *exchange properties*” (Latour 2004: 61). See also an interesting essay by John Frow, who argues that human-nonhuman differences have to be “flattened, read horizontally as a juxtaposition rather than vertically as a hierarchy of being. It’s a feature of our world that we can and do distinguish [...] things from persons. But the sort of world we live in makes it constantly possible for these two sets of kinds to exchange properties” (2001: 283).

7 The discourse of posthumanism, which cannot be developed in the limited space of this essay, is confluent with this line of thought. See, among others, Braidotti 2013, Haraway 2008; Hayles 1999; Marchesini 2002.

8 As Jane Bennett writes (2010: 12–13), “Each human is a heterogeneous compound of wonderfully vibrant, dangerously vibrant, matter”. It is not difficult to conclude that, in the “dense network of relationships” of this world of vibrant matter, “to harm one section of the web might well be to harm oneself” (Bennett 2010: 13).

presence of the experimenter contributes to determine the agency of the subatomic particles in a quantum experiment, the interpreter's presence contributes to the agency of the interpreted text. Even if matter is per se endowed with agency, the *narrative* agency of matter acquires its meaning and definition not merely per se, but chiefly if referred to a reader. This practice of "reading" is our participation in the world's "differential becoming" and is itself responsible for crafting further levels of reality; it is, as Wendy Wheeler says about the processes of semiosis and interpretation which characterize life, "fed back into [the] world [...] producing new layers or strata of understanding".⁹ The "narrative agency" of matter is implied in the idea of the world's textuality, but it is also implied in the idea that this textuality is a "reciprocity" through which human and nonhuman agents are "actively constitutive" of the world. In this sense, critical interpretation, as well as literary representation, are not simply products of human creativity, but a combination of human and nonhuman agencies assuming a narrative form. In this narrative, the world is itself a player, and interpretive practice, while exploring this narrative, becomes entangled with it as a "direct material engagement" (Barad 2012: 52).

Narrative agents, collective stories

In order to illustrate this idea via a material-ecocritical analysis, I have chosen as a case in point *The Majestic Plastic Bag*, a short "mockumentary" created by director Jeremy Konner on behalf of the California environmental organization "Heal the Bay" (www.healthebay.org) in 2010.¹⁰ Praised in many film festivals by audience and critics, the documentary denounces the gravity of plastic pollution in the oceans by taking a plastic bag as a protagonist. Narrated by Jeremy Iron, this mock-ecological "drama" ends when the bag reaches its final destination in the Pacific Ocean. Mimicking the style of wildlife documentaries, such a "plastic migration" is ironically represented as a natural process, in which the bag displays the same inborn determination of a brooding penguin in the Antarctic winter, or of a salmon swimming upstream to mate and die in a Norwegian river.

⁹ In biology, production and interpretation of signs is essential to the very existence of life processes. As Wendy Wheeler powerfully articulates it, "Living things are not machines; their reading of the signs which constitutes their world are also always interpretations which are, ipso facto, *recursively fed back into that world where further readings and interpretations go on producing new layers or strata of understanding*" (2008:154, emphasis mine).

¹⁰ The documentary is available on www.youtube.com. I am grateful to Christopher Schliephake for bringing this film to my attention.

Portrayed as a mixture of survival instinct (it “flees for its life”) and dawning intentionality (it “uses” the wind to move), the bag is clearly shown to possess a form of agency, which characterizes both its “social” and “natural” behavior as a “petroleum species”. Conforming to the “natural” role of its “species”, the plastic bag “serves” society in the same way – the narrator seems to infer – bees “serve” agriculture by pollinating flowers. Once it has accomplished its “social function”, the bag is ready to complete its “plastic cycle of life”. But, before doing so, it has to struggle against “enemies” and competitors, such as “park janitors”, the “Teacup Yorkie” (a miniature Yorkshire terrier), or marine animals that “feed from plastic”. A denizen of urban ecosystems, the plastic bag has a “trajectory” of life, something we can imagine as inscribed in its “DNA”, which leads it to eventually conclude its life in its *locus naturalis*: the Great Pacific Plastic Patch, an area of human waste – mostly plastic – within the North Pacific Gyre, estimated to be twice the size of Texas.

Providing an ironical representation of a dreadful ecological reality, the documentary reveals the illusion behind the “plastic cycle of life” – an illusion which corresponds to the one underlying the two “dangers of not owning a farm” mentioned by Aldo Leopold in the first pages of *A Sand County Almanac*: “One is the danger of supposing that breakfast comes from the grocery, and the other that the heat comes from the furnace” (2001 [1949]: 6). Just like breakfast does not come *by nature* from the grocery store, and heat does not come *by nature* from the furnace, plastic bags do not come from or tend toward whatever “natural” place; they are instead products of society and technology as collectives of human and nonhuman agencies. The Great Pacific Patch itself is not so much a “natural” thing: almost as big as a continent, it is indeed one of the most alarming phenomena of global environmental pollution.¹¹ Therefore, what the narrator’s voice does not say, but strongly implies – in other words, the “subtext” of the mockumentary – is: what is the real *story* of the plastic bag? Shall we consider it “normal” and “natural” that it concludes its “plastic cycle of life” in the Ocean, after having been manufactured in industrial plants, using chemical substances

11 To draw attention to this alarming reality, on April 11, 2013 the Italian artist Maria Cristina Finucci has provocatively declared the “Garbage Patch State” as an independent political entity at the Unesco in Paris (see <https://www.facebook.com/pages/Garbage-Patch-State/476188872436898?fref=ts>). While this act reminds us of Latour’s idea of a “parliament of things” in *We Have Never Been Modern*, it is important to remark that the Pacific Patch is not the only plastic continent in the oceans of the world. Plastic debris, in fact, tends to accumulate wherever there is an oceanic gyre. A concentration of plastic pollution has been observed also in the Mediterranean Sea (cf. Aliani et al. 2003) and, more recently, a huge concentration of polyethylene particulate has also been detected in the Great Lakes. Plastic garbage is, therefore, no longer exclusively an oceanic phenomenon. See McDermott 2013.

that are clearly alien to the metabolism of marine life and of living organisms in general? Not many people would agree to say that the final destination of the plastic bag, whether a character in a mockumentary or a thing in the “real world”, is *by nature* the Pacific Ocean. Plastic does not belong to sea environments, it is not, as the final lines of the film denounce, “indigenous” to that ecosystem. Still, this is what happens; this is what happens now, in this very moment, all over the planet. The hoarding of huge amounts of plastic objects in the Oceans is, to quote Latour again, a real “thing”, important not as a “matter of fact”, but rather as a “matter of concern” (2004a: 157). As the example shows, what Steve Mentz calls “our marine alterity” is not simply related to the “combination of hostility and fertility” which “captures the *sea’s* role” in literary metaphors as well as in our material existence of potential castaways (2009: 1002–1003, emphasis mine). Here this hostile alterity is literally inbuilt in the uncontrollable presences, transits, and unsolvable “states of suspension” which define the realm of a “marine trans-corporeality”, as Stacy Alaimo (2012) has argued. The hostility of this newly induced marine presences affects not only us humans, but the sea itself as a whole – a “whole” which covers the largest part of this planet. This collective trans-corporeality, however, is the quasi-ironical cipher of the fact that, while no living being is immune from plastic contamination, “humans ultimately consume the surprisingly dangerous objects they have produced and discarded” (Alaimo 2014: 198).¹²

Along with the many films exposing plastic pollution in the oceans, *The Majestic Plastic Bag* is useful to illuminate both the concept of matter and the concept of agency as they are used in the context of material ecocriticism: the concept of matter as a “storied matter” and the concept of agency as a “narrative agency”. In so doing, the film might help us prevent potential misunderstandings about the concept of agency itself. Agency is a thorny notion. If we ask, “do plastic bags have agency?” the answer to this question will be both “yes” and “no”. If by agency we mean something close to intentionality, or a “genetic code” semiotically inscribed in in- or pre-organic matter, then, the answer will be “no”: plastic bags do not have agency. Neither they have DNA or instincts; they do not march like penguins or swim upstream their story of love and death like salmons do. They are not alive in the sense of biology: they are things, and therefore their

¹² A conclusion apparently shared by Alaimo and Mentz (especially in his monograph *At the Bottom of Shakespeare’s Ocean*) is the claim for a “less pastoral” imagination of the maritime world: “Both new materialisms and blue-green environmentalisms suggest that there is no solid ground, no foundation, no safe place to stand” (Alaimo 2012: 490). In Mentz’s words, this translates into the necessity of “abandoning certain happy fictions and replacing them with less comforting narratives. Fewer gardens, and more shipwrecks” (2009: 98).

only “power” will be a “thing-power”, as Jane Bennett compellingly shows in *Vibrant Matter*. But if we put this question in other terms, and ask how does plastic, in its materiality, interact with other materialities, other bodies, energy cycles, ecosystems, human life, health, economy, and politics, maybe we will have to admit that there is an agentic dimension in the material existence of this bag. To be more precise, the plastic bag is an actant, a literal instance of a “material entity that modifies another entity in a trial”, crossing in space and time the bodies and forces of the collectives in which it operates. Confronted with single actants and their webs of effectiveness, material ecocriticism tries to elicit the facets of their agentic dimension by asking: what lies *beneath and beyond* a thing’s agency? Which dynamics, resources, syntheses, discourses, meanings, properties, practices? What combinations of material and discursive elements are entangled with it? What are the stories *told* to us by this plastic bag in its *expressive capacity*?

From its accidental “birth” in 1899, when the German scientist Hans von Pechmann noticed a waxy residue at the bottom of a test tube, to its widespread industrial use, polyethylene has gone a long way. It has actually inaugurated a new and eerie kind of eternity, as Primo Levi remarked. In his *Periodic Table* (1975) Levi – who, besides being a writer challenged by human and nonhuman forms of bodily interferences, was also a chemist – noted that polyethylene is “flexible, light, and splendidly impermeable: but it is also a bit too incorruptible, and not by chance God Almighty himself, although he is a master of polymerization, abstained from patenting it: He does not like incorruptible things” (Levi, 1984 [1975]: 141).

Coupled with low production costs, industrial development, and an almost universal usage, this “incorruptibility” has indeed become a curse: according to the Worldwatch Institute’s *State of the World 2004* report, some 4–5 trillion plastic bags were produced on a global scale in 2002 (2002: 22). Every year Americans dispose of over 100 billion polyethylene bags, of which only 0.6% are actually recycled.¹³ Therefore, after having been a visible (and quasi-omnipresent) part of our collective, most of the plastic produced in the world will eventually be washed out to sea and reach the Great Pacific Plastic Patch or the other plastic continents suspended in our oceans. Except for satellites and marine creatures that mistake it for plankton, it will not be there to be seen; however, it will continue to “do things” (Bennett 2010: viii) in the collective of our global ecology:

¹³ These and more data are available on line on the World Watch Institute’s website. See <http://www.worldwatch.org/system/files/Plastic%20Bags.pdf> and <http://www.worldwatch.org/node/5565>. On plastic and plankton, it is worth noticing that, already in 2001, the proportion of plankton units to plastic debris particles was estimated at 1 against 6. See Moore et al. 2001.

the “plastic cycle of life” practically interferes with every other cycle of life, present and future, epitomizing and determining a “bio-convergence between organic and inorganic, the natural and the artificial” (Bodei 2009: 80; translation mine).¹⁴ But, unlike living entities, polyethylene is, as Levi said, virtually “incorruptible”: while it can take a thousand years for a single bag to completely dissolve, its molecules will stay in the environment for an indefinite time, in spite of the legitimate anxieties of God or of other “masters of polymerization”. As in the last lines of Jorge Luis Borges’s poem *Las cosas* (*The things*), these things will survive, with or without us to experience them:

[...] *How many things,
Files, doorsills, atlases, wine glasses, nails,
Serve us like slaves who never say a word,
Blind and so mysteriously reserved.
They will endure beyond our oblivion;
And they will never know that we are gone.* (1999: 277)¹⁵

We might forget the plastic bag that we are using now, but it will outlast our memory and our very presence in this world. Maybe it will be part of the fish that someone will eat, and come back, in minute particles, to the life of our collective. It will mingle with the life of other organisms, whether human or not, and cause pollution, illness, death. But it will have (and it has already) a story – a story, which is *embodied* in a grid of inter- and intra-acting subjects. A material story. Talking of storied matter and of narrative agencies means to analyze the things around us and in us as parts of a thick fabric of stories. It means to recognize patterns of significance in the agency of things, in bodies, in material phenomena. It means to see the network of agencies that constitutes material phenomena, and to see our story as co-originated, by way of diffraction, with the agentic stories of matter. However you might consider its agency, the plastic bag emerges as a knot in a web of stories, which shape trajectories that do exist and have a formative, enactive power. Just like the earth’s past – the transformative stories built by telluric powers, magnetic forces, clashing and melting elements, and

¹⁴ Titled *Oceans in Peril: Protecting Marine Biodiversity*, The *State of the World 2007* reports: “at least 267 different species are known to have suffered from entanglement or ingestion of marine debris, and plastics and other synthetic materials cause the most problems for marine animals and birds” (see <http://www.worldwatch.org/node/5565>).

¹⁵ “[...] ¡Cuántas cosas, láminas, umbrales, atlas, copas, clavos, /nos sirven como tácitos esclavos, /ciegas y extrañamente sigilosas! /Durarán más allá de nuestro olvido; /no sabrán nunca que nos hemos ido”. Translation slightly changed from the Penguin edition (in this case, by Stephen Kessler).

dawning forms of life – has its agentic capacity extended in our present, the matter that we do not see, perceive, suspect, forget, intra-acts with other matter, including the human.

The story of the plastic bag exemplifies “the extent to which human being and thinghood overlap, the extend to which the us and the it slip-slide into each other” (Bennett 2010: 4). This more-than-human interplay discloses a narrative dimension, which is essential in the structure of ecological discourse. Reading into the “thick of things”, material ecocriticism aims to explore not only the agentic properties of material forms, whether living or not, whether organic, “natural” or not, but also how these properties act in combination with other material forms and their properties, and with discourses, with evolutionary paths, with political decisions, with pollution, with other stories. As the Italian philosopher Remo Bodei has written in a book significantly titled *La vita delle cose* (*The Life of Things*), “To redeem objects from their insignificance or from their sheer instrumental use means to better understand ourselves and the settings in which we are” (2009: 117). In fact, things can “establish synapses of sense between the various fragments of individual and collective stories, as well as between human civilizations and nature” (Bodei 2009: 117). Only if we are able to know their natural-cultural history (as Bodei says, “*their story in relationship to humans and their origin in relationship to nature*”, emphasis original), things – like W. J. T. Mitchell’s images – become “alive”. An important implication of this argument in favor of a “strategic anthropomorphism” is that liberating things from their silence is also a way to reveal the dumbness and disenchantment of a world that Bruno Latour calls a world of “factices”: a synthesis of “facts” and “fetishes”, in which the order of techno-scientific factuality is blended with fetishism, totemism, and idolatry (cf. Latour 1999: 274–278). Giving matter access to articulation, by way of stories that co-emerge with the human in their *differential intelligibility*, is a not only a way to emancipate it from dumbness, but also to liberate ourselves from the idols and “factices” of this new dualistic order.¹⁶

These considerations clarify the importance of examining matter’s narrative agency and human creativity through each other, “diffractively”. For material ecocriticism, when human creativity “plays” together with the narrative agency of matter, it can generate stories and discourses that mirror the complexity of our collective, shedding light on its multiple and “fractal” causal connections, and enlarging our horizon of meanings. In other words, *narrative agency and human creativity integrate each other producing new and more complex levels of reality*. Like in every complex system, here the whole is always bigger than the sum of the

¹⁶ On this point, see also Mitchell 2005: 26–27.

parts. These human and nonhuman “parts” generate narrative “emergences” that amplify reality, affecting not only our cognitive response to this reality, but also determining our ethical attitudes toward reality itself.

As shown by the endless examples of “embodied narratives” which are in and around us, all material reality is endowed with a “narrative agency”. The human self, too, is a complex crossroads of agencies, and of stories. It is therefore legitimate to ask: *who* is the storyteller of these stories narrated through and across bodies by actants such as toxic waste, sick cells, individual organisms, and social forces? *Who* is really the “narrating agent”, if things’ agency is a narrative agency? Rather than (metaphorically, of course!) “killing” the author, we should maybe re-draw the boundaries of authorship in a more realistic way. Narrative agents like the polyethylene of the plastic bag in *the mockumentary as well as in our oceans or in our cells* have the power to reveal that between things and humans there is always a reciprocal creation: actants never act alone. Literature, film, and art are ways to tell this cooperation, to enact the eloquence of the world and to enrich our collective of new angles from which it can be seen.

This is something that Italo Calvino, like Levi a writer with a scientific aptitude, had perfectly understood. While his entire work testifies to his attempt to voice a personal narrative powers, the final lines of his *Six Memos for the Next Millennium* give this concept the intensity of a creative and ethical legacy:

Think what it would be to have a work conceived from outside the *self*, a work that would let us escape the limited perspective of the individual ego, not only to enter into selves like our own, but to give speech to that which has no language, to the bird perching on the edge of the gutter, to the tree in spring and the tree in the fall, to stone, to cement, to plastic... Was this not perhaps what Ovid was aiming at, when he wrote about the continuity of forms? And what Lucretius was aiming at when he identified himself with that nature common to each and every thing? (2009 [1988]: 124)

The continuity of all the existing forms is a narrative, scientific-technological, *and ethical* continuity, for material ecocriticism. It is a story written and enacted by a collective of agents that intersect and interact with the human *self*. The “moral” of this collective story is the necessity of renegotiating the borders of the human, while at the same turning, as Jeffrey J. Cohen says, material “agentism” into a “form of activism” – one culminating in a paradigm shift that touches our cognitive, ethical, and political categories: “only in admitting that the inhuman is not ours to control, possesses desires and even will can we apprehend the environment disanthropocentrically, in a teetering mode that renders human centrality a problem rather than a starting point” (Cohen 2013: xxiv).

At the end of this essay, maybe the word “story” will continue to sound like a metaphor, and to sound anthropomorphic. Let us admit it: we do not know

whether nonhuman agency – taken in itself – tells a story. But we know that, when it *meets* our cognitive practices – when it intra-acts with us – this agency *produces* a story, and this encounter is a way of “bringing forth the world in its specificity, including ourselves” (Barad 2007: 353). The world is full of these stories coming “from outside the self”, stories of which the human is not its emanating center. But the human is, nevertheless, part of this process through which the world becomes itself storied; it is entangled in this process and participates in the active constitution of this “reciprocal reality”. This is Barad’s intra-action, and it is also the ethical dimension intrinsic in every participative act in the shaping of reality. In a world where things “no longer seem like innocent, passive objects, but have “lives of their own, with stories to tell, and voices to tell them” (Mitchell 2005: 111), we creatively and *diffractively* participate in the “differential” making of our shared dimension of life, because “[a]ll real living is meeting” and “each meeting matters” (Barad 2007: 353). Diffraction, Barad says, “is not about any difference but about which differences matter” (2008: 328). Advocating for a cross-disciplinary scholarship that creates patterns of interference with the reality of our collective, material ecocriticism is trying to “make a difference”, intra-acting with the world and bringing its stories to light.

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